

Space Technology Game Changing Development

Monthly Highlights

February 2013

NASA Creates Space Technology Mission Directorate

As part of the Obama Administration's recognition of the critical role that space technology and innovation will play in enabling both future space missions and bettering life here on Earth, NASA Administrator Charles Bolden has announced the creation of the **Space Technology Mission Directorate**. The directorate will be a catalyst for the creation of technologies and innovation needed to maintain NASA leadership in space while also benefiting America's economy.

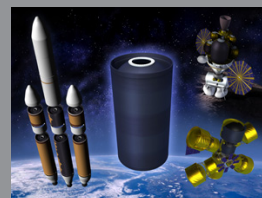
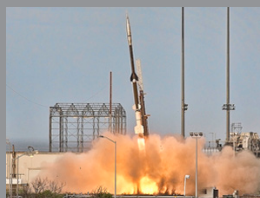
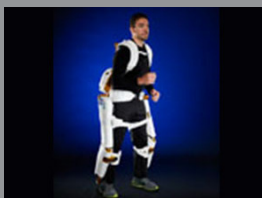
The Space Technology Mission Directorate will develop the cross-cutting, advanced and pioneering new technologies needed for NASA's current and future missions, many of which also benefit America's aerospace industries, other government agencies, and address national needs. NASA will focus leadership responsibility for the existing Space Technology Program in the mission directorate, improving communication, management and accountability of critical technology investment activities across the agency.

Associate Administrator Michael Gazarik will head the organization. He previously served as the director of the Space Technology Program within the Office of the Chief Technologist. Serving as the Deputy Associate Administrator for Programs, James Reuther brings years of expertise in technology development, research

Space Technology Mission Directorate

www.nasa.gov/spacetechnology

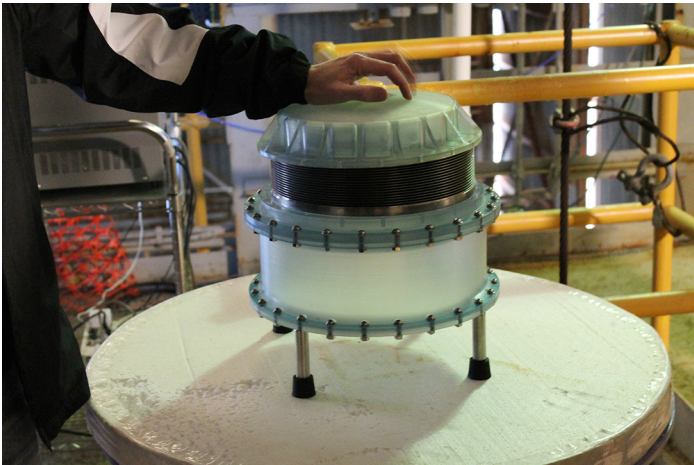
and project management to oversee the nine programs within the mission directorate. Reuther previously served as deputy director of the Space Technology Program within the Office of the Chief Technologist. Dorothy Rasco, formerly the business manager of the Space Shuttle Program and the manager of the Space Shuttle Program Transition and Retirement, will join the directorate as the Deputy Associate Administrator for Management, assisting with the organizations strategic planning and management.



Center Reviews Continue

Game Changing Development Program management continued its center reviews in February, visiting NASA's **Marshall Spaceflight Center** and NASA's **Langley Research Center**. At both centers, manage-

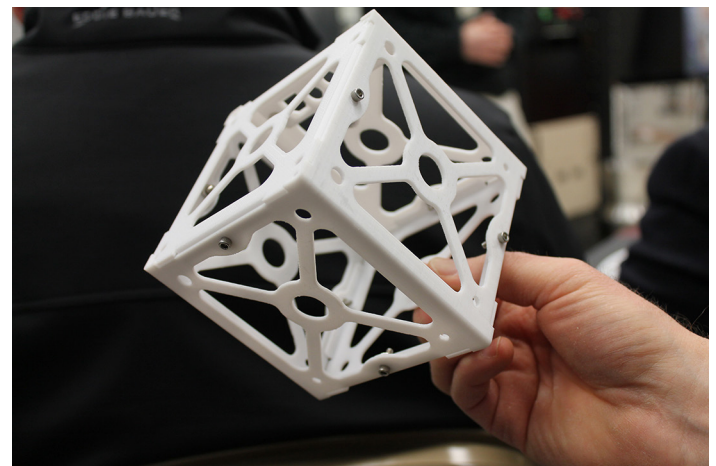
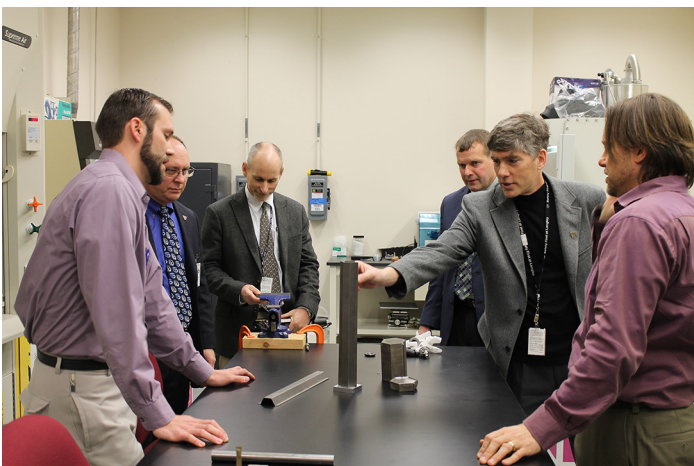
ment heard overviews on existing projects such as HIADS, Composite Cryotanks, Additive Manufacturing, Lightweight Materials and Structures as well as presentations on new emerging technologies.



At NASA Marshall, management got a “shaky” tour of the Fluid Structure Coupling Damper technology (above). Program management (below) discusses Nuclear Thermal Propulsion technology.



Mia Siochi (above) of the Advanced Materials and Processing Branch gives an overview of carbon nanotubes. The program office heard an overview on an emerging technology, additive manufacturing microsatellite (below).



In the News

Additive Manufacturing Makes Headlines

Following the President's vocal support of additive manufacturing in his State of the Union speech, **NASA Administrator Charlie Bolden** visited Marshall Spaceflight Center's additive manufacturing facility in February, giving further support to the agency's focus and commitment to this technology. Bolden's visit drew media attention and articles on 3-D printing, including coverage by Popular Mechanics and website Mashable.

John Vickers, assistant manager of the Materials and Processes Laboratory at NASA Marshall, and project manager for Game Changing's Composite Cryotank Demonstration Project said:

"Additive manufacturing is this new technology that really gives us an endless set of possibilities for the products we manufacture at NASA for our terrestrial launch vehicle and our in-space applications."

Read more: <http://tinyurl.com/a8hoa9d>



NASA/MSFC/Emmett Given

NASA Administrator Charles Bolden (second from right) being briefed on 3D printing and prototyping technology to create parts for the Space Launch System at Marshall Space Flight Center.

On Feb. 7, a formal announcement was made that **NASA Glenn Research Center** will be working with **Case Western Reserve University** and **PTC** to support the Strategic Partners for the Advancement of Collaborative Engineering (SPACE) Initiative.



SPACE brings together global leaders in product development and partners them with colleges of engineering and business to catalyze new partnerships in product development education and research. The partnership will encourage industry and academic collaboration, create

meaningful project experiences and foster cross-educational programs focused on Product Lifecycle Management (PLM) education.

Game Changing Development's Manufacturing Innovation Project, located at NASA Glenn, is investigating opportunities to expand NASA MIP technology infusion into the manufacturing sector. We are collaborating regionally and identifying opportunities to support additive manufacturing curriculum/degree development between NASA and local colleges and universities.

Game Changing Education and Public Outreach

HIADS In the Community



The HIADS team had a busy February supporting several education and public outreach activities. Above, project manager Mary Beth Wusk is shown talking about IRVE-3 during the two-day NASA/Newport News Shipbuilding Career Days Event at the shipyard. HIADS also presented an overview of the project during the Game Changing Development Program center review at NASA Langley. Team members visited multiple classrooms in the Hampton Roads, Va., area in support of the Day of Education.



Game On!
<http://gameon.nasa.gov>



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